APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
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TERRANCE A MEADOR
BAKER MAXHAM JESTER & MEADOR
SYMPHONY TOWERS
750 B STREET SUITE 3100
SAN DIEGO CA 92101-3978

EXAMINER
HOFF, M

ART UNIT	PAPER NUMBER
2819	6

DATE MAILED: 11/10/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

☒ Responsive to communication(s) filed on *Sep 4, 1998*   .

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire ___*three*___ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

  ☒ Claim(s) *1-34* _____ is/are pending in the application.

       Of the above, claim(s) _____ is/are withdrawn from consideration.

  ☐ Claim(s) _____ is/are allowed.

  ☒ Claim(s) *1-34* _____ is/are rejected.

  ☐ Claim(s) _____ is/are objected to.

  ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

  ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

  ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

  ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

  ☐ The specification is objected to by the Examiner.

  ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

  ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    ☐ All ☐ Some* ☐ None   of the CERTIFIED copies of the priority documents have been

      ☐ received.

      ☐ received in Application No. (Series Code/Serial Number) _____ .

      ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    *Certified copies not received: _____ .

  ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

  ☐ Notice of References Cited, PTO-892

  ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

  ☐ Interview Summary, PTO-413

  ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

  ☐ Notice of Informal Patent Application, PTO-152

--- *SEE OFFICE ACTION ON THE FOLLOWING PAGES* ---

1.   The disclosure remains objected to because of the following informalities:

Page 5, line 21, "Hose" should be -- Host --.

Claims 2, 8, 13, 19, 24, and 30, line 2, "to" should be -- on --.

Appropriate correction is required.

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3.   Claims 1, 5-8, 12, 16-19, 23, 27-30, and 34 are rejected under 35 U.S.C. 102(e) as being

anticipated by Clark, II et al.

Clark, II et al. teach a method of data compression, embodied as a programmed product

stored on signal-bearing media, and performed with reference to data storage, comprising

receiving data blocks, compressing the data blocks, evaluating the resulting compression, and

ceasing application of that compression process if the compression fails to satisfy

predetermined compression criteria (e.g., unsatisfactory compression ratio). Note especially

Figure 2, and col. 3-4, of Clark, II et al.

As implicitly conceded by Applicants, Clark, II et al. teach determining an aggregate

compression ratio, determining whether the aggregate compression ratio exceeds a threshold, and

if so, deeming that the compression satisfies predetermined criteria. Clark, II teaches determining

the compression ratio as a moving average. See col. 3, line 51 of Clark, II et al.

Applicants claim no further definition of the term "data block." At page 9 of the

specification, Applicants refer to a block as "preferably ... a contiguous group of related data."

Clark, II et al. disclose in Figure 2 a repeating process or receiving raw data and compressing

same; at column 3, lines 28-32, Clark, II et al. recite that "[t]he raw data is preferably in the form

of an 8 bit character which, alone or in conjunction with a string of prior characters, is the subject

of a search in the dictionary at step 38." The Examiner considers the repetitive input of 8 bit raw

data taught by Clark, II et al. to meet the claimed recitation of "receiving multiple input data

blocks."

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 2-4, 9-11, 13-15, 20-22, 24-26, and 31-33 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Clark, II et al.

As noted above, Clark, II et al. teach all the features of the claimed invention, except for

determining how many of a predetermined number of data blocks were compressed sufficiently,

rather than computing an average compression ratio of those blocks, and ceasing compression for

a predetermined time upon determination that compression is not effective, rather than ceasing

compression until satisfaction of predetermined criteria, such as Clark, II et al.'s determination that compression would once again be effective on the raw data.

The person having ordinary skill in the art would have found it obvious to modify Clark, II et al. to count the number of data blocks that were compressed "sufficiently," i.e. above a predetermined threshold. Clark, II et al. teaches computing a compression coefficient as a moving average of the compression performance of the system. Such computation necessarily involves at least two addition operations and one division operation each time the coefficient is updated. The person having ordinary skill in the art would have recognized the potential time savings associated with simply counting a block if it was sufficiently compressed, relative to the multi-step mathematics of determining a compression coefficient. Such a skilled artisan would have been motivated to employ a counting method if the processing time saved were considered more important than the precision lost, relative to the Clark, II et al. system.

The person having ordinary skill in the art would have found it obvious to modify Clark, II et al. to cease compression for a predetermined time rather than until predetermined conditions exist in the data. Watchdog timers per se are well known in the art, and the skilled artisan would have realized the lower cost and simpler design to be achieved by simply waiting for a given time period rather than monitoring the input data for future compressibility.

6.   Applicants' arguments filed September 4, 1998 have been fully considered but they are not persuasive.
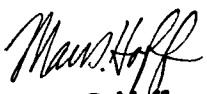
As noted, Applicants claim no limitation more specific than the term "data block." The

Examiner construes the repetitive input of 8 bit data to meet the claimed recitation of "receiving

multiple input data blocks."

The Examiner further considers the claim limitations regarding determining the number of

blocks sufficiently compressed, and ceasing compression for a predetermined time, to be obvious

in view of the patent to Clark, II et al., as elaborated in the above rejection under 35 U.S.C.

§ 103(a).

7.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Marc Hoff whose telephone number is (703) 308-1677.

Marc Hoff
November 6, 1998

Marc S. Hoff
Primary Examiner